

Review by Richard Dawkins of *Not in Our Genes* by S.Rose, L.Kamin & R.Lewontin. Originally published in *New Scientist*, 24th Jan 1985, pp 59-60.

THOSE OF US with time to concentrate on our historic mission to exploit workers and oppress minorities have a great need to “legitimate” our nefarious activities. The first legitimator we came up with was religion which has worked pretty well through most of history but, “the static world of social relations legitimated by God reflected, and was reflected by, the dominant view of the natural world as itself static”.

Latterly there has been an increasing need for a new legitimator. So we developed one: Science.

“The consequence was to change finally the form of the legitimating ideology of bourgeois society. No longer able to rely upon the myth of a deity. . . the dominant class dethroned God and replaced him with science. . . If anything, this new legitimator of the social order was more formidable than the one it replaced . . . Science is the ultimate legitimator of bourgeois ideology. ‘

Legitimation is also the primary purpose of universities:

“ . . . it is universities that have become the chief institutions for the creation of biological determinism . . . Thus, universities serve as creators, propagators, and legitimators of the ideology of biological determinism. If biological determinism is a weapon in the struggle between classes, then the universities are weapons factories, and their teaching and research faculties are the engineers, designers, and production workers.”

And to think that, through all these years working in universities, I had imagined that the purpose of science was to solve the riddles of the Universe: to comprehend the nature of existence, of space and time and of eternity; of fundamental particles spread through 100 billion galaxies; of complexity and living organisation and the slow dance through three billion years of geological time. No no, these trivial matters fade into insignificance beside the overriding need to legitimate bourgeois ideology.

How can I sum up this book? Imagine a sort of scientific Dave Spart trying to get into “Pseud’s Corner”. Even the acknowledgements give us fair warning of what to expect. Where others might thank colleagues and friends, our authors acknowledge “lovers” and “comrades”. Actually, I suppose there is something rather sweet about this, in a passé, sixtiesish sort of way. And the 1960s have a mythic role to play in the authors’ bizarre conspiracy theory of science. It was in response to that Arcadian decade (when “Students challenged the legitimacy of their universities”) that “The newest form of biological determinism, sociobiology, has been legitimated”

Sociobiology, it seems, makes the two assertions “that are *required* if it is to *serve as* a legitimization and perpetuation of the social order” (my emphasis). The “Panglossianism”—J. B. S. Haldane’s term is (mis)used without acknowledgement—of sociobiology “has played an important role in legitimation”, but this is not its main feature:

“Sociobiology is a reductionist, biological determinist explanation of human existence. Its adherents claim, first, that the details of present and past social arrangements are the inevitable manifestations of the specific action of genes.”

Unfortunately, academic sociobiologists, unaccountably neglecting their responsibilities towards the class struggle, do not seem anywhere to have actually *said* that human social arrangements are the inevitable manifestations of genes. Rose, Kamin and Lewontin (henceforth RKL) have accordingly had to go farther afield for their substantiating quotations, getting them from such respected sociobiologists as Mr Patrick Jenkin when he was minister for social services, and various dubious representatives of the National Front and the *Nouvelle Droite* whose works most of us would not ordinarily see (they are no doubt grateful for the publicity). The minister gives especially good value, by using a “double legitimation of science and God”

Enough of this, let me speak plainly. RKL cannot substantiate their allegation about sociobiologists believing in inevitable genetic determination because the allegation is false. The myth of the “inevitability” of genetic effects has nothing whatever to do with sociobiology, and has

everything to do with RKL's paranoiac and demonological theology of science. Sociobiologists, such as myself (much as I have always disliked the name, this book finally provokes me to stand up and be counted), are in the business of trying to work out the conditions under which Darwinian theory might be applicable to behaviour. If we tried to do our Darwinian theorising without postulating genes affecting behaviour, we should get it wrong. *That* is why sociobiologists talk about genes so much, and that is all there is to it. The idea of "inevitability" never enters their heads.

RKL have no clear idea of what they mean by biological determinism. "Determinist", for them, is simply one half of a double-barrelled blunderbuss term, with much the same role and lack of content as "Mendelist-Morganist" had in the vocabulary of an earlier generation of comrades. Today's other barrel, fired off with equal monotony and imprecision is "reductionist".

"(Reductionists) argue that the properties of a human society are... no more than the sums of the individual behaviours and tendencies of the individual humans of which that society is composed. Societies are 'aggressive' because the individuals who compose them are 'aggressive', for instance."

As I am described in the book as "the most reductionist of sociobiologists", I can speak with authority here. I believe that Bach was a musical man. Therefore of course, being a good reductionist, I must obviously believe that Bach's brain was made of musical atoms! Do Rose *et al* sincerely think that *anybody* could be that silly? Presumably not, yet my Bach example is a precise analogy to "Societies are 'aggressive' because the individuals who compose them are 'aggressive'".

Why do RKL find it necessary to *reduce* a perfectly sensible belief (that complex wholes should be explained *in terms of* their parts) to an idiotic travesty (that the properties of a complex whole are simply the *sum* of those same properties in the parts)? "In terms of" covers a multitude of highly sophisticated causal interactions, and mathematical relations of which summation is only the simplest. Reductionism, in the "sum of the parts" sense, is obviously daft, and is nowhere to be found in

the writings of real biologists. Reductionism, in the “in terms of “ sense, is, in the words of the Medawars, “the most successful research stratagem ever devised” (*Aristotle to Zoos*, 1984).

RKL tell us that “. . . some of the most penetrating and scathing critiques of sociobiology have come from anthropologists...” The two most famous anthropologists cited are Marshall Sahlins and Sherwood Washburn, and their “penetrating” critiques are, indeed, well worth looking up. Washburn thinks that, as all humans, regardless of kinship, share more than 99 per cent of their genes, “. . . genetics actually supports the beliefs of the social sciences, not the calculations of the sociobiologists.” Lewontin, the brilliant geneticist, could, if he wanted to, quickly clear up this pathetic little misunderstanding of kin selection theory. Sahlins, in a book described as “a withering attack” on sociobiology, thinks that the theory of kin selection cannot work because only a minority of human cultures have developed the concept of the fraction (necessary, you see, in order for people to calculate their coefficients of relatedness!). Lewontin the geneticist would not tolerate elementary blunders like this I from a first-year undergraduate. But for Lewontin the “radical scientist”, apparently any criticism of sociobiology, no matter I how bungling and ignorant, is penetrating, scathing and withering.

RKL see their main role I as a negative and purging one, even casting themselves as a gallant little fire brigade:

“ . . . constantly being called out in the middle of the night to put out the latest conflagration . . . All of these deterministic fires need to be doused with the cold water of reason before the entire intellectual neighborhood is in flames.”

This dooms them to constant nay-saying, and they therefore now feel an obligation to produce “some positive program for understanding human life”. What, then, is our authors’ positive contribution to understanding life?

At this point, self-conscious throat-clearing becomes almost audible and the reader is led to anticipate some good embarrassing stuff. We are

promised “an alternative world view”. What will it be? “Holistic biology”? “Structuralistic biology”? Connoisseurs of the genre might have put their money on either of these, or perhaps on “Deconstructionist biology”. But the alternative world view turns out to be even better: “Dialectical” biology! And what exactly is dialectical biology? Well—think, for example:

“of the baking of a cake: the taste of the product is the result of a complex interaction of components—such as butter, sugar, and flour—exposed for various periods to elevated temperatures; it is not dissociable into such-or-such a percent of flour, such-or-such of butter, etc., although each and every component. . . has its contribution to make to the final product.”

When put like that, this dialectical biology seems to make a lot of sense. Perhaps even I can be a dialectical biologist. Come to think of it, isn’t there something familiar about that cake? Yes, here it is, in a 1981 publication by the most reductionist of sociobiologists:

“... If we follow a particular recipe, word for word, in a cookery book, what finally emerges from the oven is a cake. we cannot now break the cake into its component crumbs and say: this crumb corresponds to the first word in the recipe, this crumb corresponds to the second word in the recipe etc. With minor exceptions such as the cherry on top, there is no one-to-one mapping from words of recipe to ‘bits’ of cake. The whole recipe maps onto the whole cake.”

I am not, of course, interested in claiming priority for the cake (Pat Bateson had it first, in any case). But what I do hope is that this little coincidence may at least give RKL pause. Could it be that their targets are not quite the naively atomistic reductionists they would desperately like them to be?

So, life is complex and its causal factors interact. If that is “dialectical”, big deal. But no, it seems that “interactionism”, though good in its way, is not quite “dialectical”. And what is the difference?

“ . . . First (interactionism) supposes the alienation’ of organism and the environment.... second, it accepts the ontological priority of the individual over the collectivity and therefore of the epistemological sufficiency of. . . “ (emphasis mine).

There is no need to go on. This sort of writing appears to be intended to communicate nothing. Is it intended to impress, while putting down smoke to conceal the fact that nothing is actually being said?